Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving 9-1-1 Reliability	)	PS Docket No. 13-75
	)	
Reliability and Continuity of Communications Networks, Including Broadband Technologies	)	PS Docket No. 11-60

COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.405 of the Commission's Rules, the Utilities Telecom Council ("UTC") hereby files the following comments in response to the Commission's Notice of Proposed Rulemaking in the above-referenced matter.[1] While the focus of the NPRM is on 9-1-1 reliability, UTC comments that the Commission should realize that many of the same issues that plague the reliability of 9-1-1 services also affect the performance and reliability of commercial communications services in general. Due to these performance and reliability issues, utilities and other critical infrastructure industries (CII) generally limit their use of commercial communications services to meet their non-mission critical communications needs. Utilities and other CII fundamentally rely on their private internal communications networks to support their mission critical communications needs. While UTC appreciates the Commission's efforts to improve the reliability of commercial communications services including 9-1-1 services, UTC urges the Commission to support the reliability of the private internal networks or utilities and other CII by providing access to suitable, auction-exempt, licensed spectrum.

I. Introduction

UTC is the international trade association for the telecommunications and information technology interests of electric, gas and water utilities, pipeline companies and other critical infrastructure industries. Its members include large investor-owned utilities that serve millions of customers across multi-state

[1] *Improving 9-1-1 Reliability*, Notice of Proposed Rulemaking, PS Docket 13-75, 2013 WL 1187778 (hereinafter "NPRM").

service territories to relatively smaller municipal and cooperative utilities that may serve thousands of customers in isolated towns, cities and rural areas of the country. In addition, UTC is allied with the all of the major electric, gas and water utility associations, as well as other organizations representing various other critical infrastructure industries – as part of its Critical Infrastructure Communications Coalition.

All of UTC's members own, manage or control extensive communications systems to support the safe, reliable and efficient delivery of essential services to the public at large. Due to the critical nature of these communications systems, they are designed, built and operated to demanding standards that exceed those of commercial communications systems for coverage, availability and survivability. Utilities need ubiquitous coverage all across their service territories, including remote areas that tend to be underserved or unserved by commercial carriers. They also need communications systems that do not become unavailable due to traffic congestion, particularly during emergency scenarios when utilities need reliable communications the most. Finally, their networks need to be able to survive natural and manmade disasters; so they have extended power back-up and they are built to withstand high winds and heavy ice. As such, utility networks are built for reliability; which sets them apart from commercial systems that are designed for capacity.

Although they rely on their own private internal networks, utilities and other CII also use carrier networks for communications to support the delivery of their essential services to the public at large. These communications include leased lines and wireless communications. Utilities use commercial networks where they lack coverage on their own private networks or for certain targeted applications. As they deploy smart grid, some utilities have turned to carriers to meet their needs for communications for certain applications, such as advanced metering. Thus far, utility use of carrier networks for smart grid has been limited, and part of the reason is that utilities do have concerns about the capability of carrier networks to meet utility standards for communications reliability. As such, UTC is pleased that the FCC has provided this opportunity to raise these concerns in this proceeding.

II. The Commission Should Provide Utilities and CII With Access to Spectrum to Ensure the Reliability of Essential Electric, Gas and Water Services.

In the NPRM, the Commission identified several issues including back up power and network diversity as contributory factors affecting 9-1-1 reliability during the derecho storms in June 2012.[2] In order to improve these issues, the Commission suggested that voluntary best practices should be supplemented by mandates.[3] It recognized that "severe weather cannot by itself excuse failures in a 9-1-1 network that should be designed to withstand such events, even when they arrive unexpectedly," and that "additional Commission action is warranted – particularly if the rate of failure in the region affected by the derecho reflects vulnerabilities in 9-1-1 infrastructure nationwide."[4] Therefore, in order to implement improvements to each of the identified issues, the Commission invited comment on four possible approaches, including reporting, certification, performance reliability requirements, and compliance reviews and inspections.[5]

Rather than recommend any one approach or two or more approaches for implementing improvements to promote 9-1-1 reliability, UTC comments that the Commission should recognize that the shortfalls that led to the outages during the derecho are indicative of the larger issues that exist with regard to the reliability of the commercial communications network in general. This should not come as a surprise to the Commission, and in fact, it has conducted a *Notice of Inquiry* into network reliability and resiliency in general.[6] The record from the NOI shows that commercial services generally lack reliability and resiliency. Furthermore, the record in the NOI shows that this lack of reliability and resiliency

[2] NPRM at ¶14 (listing as reliability issues: "routine 9-1-1 circuit auditing", "adequate central office backup power", "physical diversity of monitor and control links", and "improved PSAP notification when outages affect 9-1-1 service.")

[3] *Id*. at ¶18 (stating that "The June 2012 derecho … revealed the limits of that approach and highlighted the potential benefits and importance of supplementing a voluntary approach with respect to critical 9-1-1 communications.")

[4] *Id*. at ¶22.

[5] *Id*. at ¶26-31.

[6] *Reliability and Continuity of Commercial Networks, Including Broadband Technologies*, Notice of Inquiry, PS Docket No. 11-60, 26 F.C.C.R. 5614 (2011)("*NOI*").

discourages utilities from using commercial networks for mission critical applications.

For example, Oncor reported that it "experienced operational problems several times when commercial wireline communications equipment has failed or lacked sufficient redundancy."[7] Specifically, Oncor explained that fires, floods and copper theft resulted in disconnecting substations from the utility's remote monitoring and control systems. "In each instance, the commercial communications providers did not have sufficient redundant facilities and, as a result, Oncor's communications and operations were significantly and negatively disrupted, sometimes for several days."[8] Oncor also reported problems with a "major" commercial mobile service provider in 2010, which caused Oncor to lose its mobile data capabilities for an entire week.[9] More recently, it has experienced ongoing problems that have affected mobile voice as well as data communications.[10] According to Oncor, the carrier was "less than forthcoming" when asked about the problems.[11]

While UTC supports the Commission's efforts to improve the reliability and resiliency of commercial communications services generally, including 9-1-1 services; UTC recommends that the Commission also provide utilities and other CII with access to spectrum that will ensure the reliability and resiliency of their private internal communications networks that they use for various mission critical applications. The weaknesses and shortfalls of commercial networks during the derecho are not isolated or anecdotal. Instead, they point up the magnitude of the problems that were highlighted on the record in response to the Commission's NOI. Moreover, the gravity of these issues point up the need to support the reliability and resiliency of the private internal communications networks of utilities and other CII. These issues could threaten the delivery of essential electric, gas and water services to the public, as well as the

[7] *See* Comments of Oncor in PS Docket No. 11-60 at 3 (filed July 7, 2011).

[8] *Id.*

[9] *Id*. at 7

[10] *Id.*

[11] *Id.*

reliability of 9-1-1 services.

While implementing requirements as well as voluntary best practices may improve the reliability of commercial services, it may not be practically or economically reasonable to do so, particularly system-wide. As the Commission notes, there are significant costs associated with implementing certain requirements, such as backup power, even in the limited context of 9-1-1 reliability. These costs would be significantly greater, if requirements were implemented system-wide. Moreover, the time to implement such requirements may also be significant.

Utilities and CII can't afford to wait for commercial networks to improve. They need reliable communications now, and providing access to spectrum for their private internal communications networks will promote the reliability of underlying electric, gas and water services that utilities provide and upon which the public and first responders depend. Although utilities and other CII may use commercial networks for some communications needs, fundamentally utilities and other CII rely on their own private internal communications networks to support the safe, reliable and efficient delivery of essential services to the public at large. In addition, access to suitable spectrum is a critical component for utilities' wireless communications needs. However, utilities and other CII lack access to suitable spectrum to meet their increasing communications needs, due to the advent of smart grid and other advanced critical infrastructure systems. Therefore, the Commission should provide access to suitable spectrum, consistent with the comments of UTC and other utility and CII stakeholders in this proceeding, as well as numerous other proceedings.

Respectfully submitted,

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